

Amendment and Response Under 37 C.F.R. 1.116

Applicant: John Greeven et al.

Serial No.: 09/823,188

Filed: March 29, 2001

Docket No.: 10004662-1 (H301.419.101)

Title: METHOD AND APPARATUS FOR DELIVERING AND REFILLING PHARMECEUTICALS

IN THE CLAIMS

Please cancel claims 1-21, 23-24, and 40-49 without prejudice.

Please add claims 59-66.

Please amend claims 22, 25-30, 32-39 and 50-58 as follows:

1-21. (Canceled)

22. (Currently Amended) A patient's intelligent drug dispensing appliance comprising:
a controller;

a reservoir configured to contain a plurality of individual unit doses of an unpackaged pharmaceutical specific to an individual patient and to be dispensed over time to the individual patient, the unpackaged pharmaceutical including ~~at least one of individual tablets, liquids, or gasses;~~ to be administered directly to the individual patient as individual unit doses ~~for direct use by the individual patient~~ according to a treatment regimen;

a drug delivery mechanism , coupled to, and responsive to the controller and to the reservoir, to controllably dispense the unpackaged pharmaceutical directly from the reservoir to the individual patient in a precise amount corresponding to the individual unit doses in response to signals from ~~said the~~ controller; and

a data network interface coupled to ~~said the controller and configured to send ,and to receive,~~ a data message regarding the unpackaged pharmaceutical over a data network through the data network interface to and from, respectively, at least one of a health care service provider and a pharmaceutical supplier wherein the data message from the patient's intelligent drug dispensing appliance identifies the patient for whom the unpackaged pharmaceutical is required and the identity of the unpackaged pharmaceutical.;

wherein the patient's intelligent drug dispensing appliance is sized and shaped for ~~non-hospital~~ placement proximate to the individual patient remote from a health care facility.

23. (Canceled).

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24. (Canceled)

25. (Currently Amended) The patient's intelligent drug dispensing appliance of claim 22 further including a human/display interface.

26. (Currently Amended) The patient's intelligent drug dispensing appliance of claims-23 and 2422 wherein said the data network interface is capable of sending a data message to effect payment for the provision of health care service.

27. (Currently Amended) The patient's intelligent drug dispensing appliance of claims-23 and 2422 wherein the data network interface is capable of sending a data message to effect payment for the provision of a pharmaceutical.

28. (Currently Amended) The patient's intelligent drug dispensing appliance of claims-23 and 2422 wherein the data network interface is capable of sending a data message transported via the Internet.

29. (Currently Amended) The patient's intelligent drug dispensing appliance of claims-23 and 2422 where the data network interface is capable of sending a data message transported via a wireless communication device.

30. (Currently Amended) The patient's intelligent drug dispensing appliance of claim 22 further including a pharmaceutical level detector in communication with the controller and the reservoir, the pharmaceutical level detector configured to ascertain ~~at least one of~~ a measured weight amount of the unpackaged pharmaceutical remaining in the reservoir, ~~a decremented amount of the unpackaged pharmaceutical remaining in the reservoir, a depth measurement of the unpackaged pharmaceutical in the reservoir, and a static pressure within the reservoir.~~

31. (Canceled)

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32. (Currently Amended) An intelligent drug dispensing system providing replenishment of pharmaceutical medication, the system comprising:

an a single patient intelligent drug dispensing appliance, including a data network interface through which pharmaceutical replenishment request signals can be received, a controller and a reservoir configured to contain a plurality of individual unit doses of unpackaged pharmaceutical and configured to be dispensed the doses directly to an individual patient, the unpackaged pharmaceutical including ~~at least one of individual tablets, liquids, and gasses~~, to be administered directly to the patient as individual unit doses according to a treatment regiment ~~for direct use by the patient~~, wherein the single patient intelligent drug dispensing appliance is sized and shaped for placement proximate to the patient at a non-health care facility~~hospital~~ location; and

a pharmaceutical replenishment request data server in communication with the data network interface to send medication replenishment request signals to ~~at least one~~the single patient intelligent drug dispensing appliance.

33. (Currently Amended) The intelligent drug dispensing system of claims ~~31 and~~ 32 wherein the pharmaceutical replenishment request data server is comprised of a health care service provider computer, responsive to data messages from a patient of the health care service provider to generate drug refill orders.

34. (Currently Amended) The intelligent drug dispensing system of claim ~~31 and~~ 32 wherein the pharmaceutical replenishment request data server is comprised of a drug supplier computer, responsive to data messages from either a patient or a health care service provider so as to effect shipment of medication to the patient.

35. (Currently Amended) The intelligent drug dispensing system of claim ~~31 and~~ 32 wherein the pharmaceutical replenishment request data server is comprised of a insurance provider computer, responsive to data messages from either a patient or a health care service provider so as to approve payment for ~~said the~~ the medication.

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36. (Currently Amended) An intelligent drug dispensing system providing automatic replenishment of pharmaceuticals, the system comprising:

a pharmaceutical replenishment request data server operatively coupled to a data network ~~so as and configured~~ to receive pharmaceutical replenishment request messages from at least one single patient intelligent drug dispensing appliance via the data network, and to cause replenishment of pharmaceuticals to the at least one single patient intelligent drug dispensing appliance;

wherein the pharmaceutical replenishment request message is configured to replenish an unpackaged pharmaceutical in the at least one single patient intelligent drug dispensing appliance apparatus, the appliance including a controller and a reservoir configured to hold of a plurality of individual unit doses of the unpackaged pharmaceutical and configured to be dispensed the doses over time from the reservoir directly to an individual patient in a plurality of discrete individual unit doses according to a treatment regimen for direct use by the patient, wherein the at least one single patient intelligent drug dispensing apparatus is sized and shaped for placement proximate to the patient at a non-health care facility~~hospital~~ location.

37. (Currently Amended) The intelligent drug dispensing system of claim 36 wherein the pharmaceutical replenishment request data server is comprised of a health care service provider computer, responsive to data messages sent, via the at least one single patient intelligent drug dispensing appliance, from a patient of the health care service provider to generate drug refill orders.

38. (Currently Amended) The intelligent drug dispensing system of claim 36 wherein the pharmaceutical replenishment request data server is comprised of a pharmaceutical provider computer, responsive to data messages, via the at least one single patient intelligent drug dispensing appliance, sent from a health care service provider to generate drug refill orders.

39. (Currently Amended) The intelligent drug dispensing system of claim 36 wherein the pharmaceutical replenishment request data server is comprised of an insurance carrier computer, responsive to data messages sent from a health care service provider to enable at least one of

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generate generating drug refill orders for a patient at the at least one single patient intelligent drug dispensing appliance and approving payment for the pharmaceutical.

40-49. (Canceled)

50. (Currently Amended) The patient's intelligent drug dispensing appliance of claim 6549 wherein the controller includes a memory device contained within the appliance.

51. (Currently Amended) The patient's intelligent drug dispensing appliance of claim 50 wherein the memory device contains at least one the treatment regimen regulating dispensing of the individual unit doses of the unpackaged pharmaceutical to the individual patient.

52. (Currently Amended) The patient's intelligent drug dispensing appliance apparatus of claim 51 wherein the data network interface is adapted to be removably coupled to at least one the patient monitoring sensors.

53. (Currently Amended) A patient's ~~An~~ intelligent drug dispensing appliance comprising:

a controller;

a reservoir configured to contain a supply of unpackaged pharmaceutical specific to the individual patient to be dispensed over time, the supply including a grouped plurality of individual unit doses of tablets;

a drug dispensing mechanism coupled to, and responsive to, the controller and to the reservoir to dispense the tablets of unpackaged pharmaceutical directly to the individual patient from the reservoir in a precise amount of the individual unit doses in response to signals from ~~said the~~ controller;

a data network interface coupled to ~~said the~~ controller; and

a pharmaceutical depletion guard, the pharmaceutical depletion guard including a pharmaceutical level detector coupled to the controller and the data network interface, the data network interface is capable of sending a message to at least one of a health care provider ~~or and~~ a pharmaceutical supplier, the data message from the data network interface including at least

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~~one of a value of a measured amount of the tablets of unpackaged pharmaceutical in the reservoir, a patient identity, a pharmaceutical identity, and a treatment regimen,~~

wherein the intelligent drug dispensing appliance is sized and shaped for placement proximate to the individual patient remote from a hospital location.

54. (Currently Amended) The intelligent drug dispensing appliance of claim 53 wherein the reservoir is configured to also contain the unpackaged pharmaceutical ~~as includes~~ at least one of ~~individual tablets, liquids, or gasses~~ a liquid and a gas.

55. (Currently Amended) The intelligent drug dispensing appliance of claim ~~53~~54 further including a human/display interface, the human/display interface including at least one of a tactile input device or a speech recognition device operatively coupled to the controller.

56. (Currently Amended) The intelligent drug dispensing appliance of claim ~~53~~55 further including at least one sensor operatively coupled to the controller, the sensor capable of providing data signals indicative of the patient's physical condition.

57. (Currently Amended) The intelligent drug dispensing system ~~appliance~~ of claims ~~31 and 32~~ wherein the single patient intelligent drug dispensing appliance further ~~comprising~~ comprises:

a pharmaceutical depletion guard, the pharmaceutical depletion guard including a pharmaceutical level detector coupled to the controller and the data network interface, wherein the data network interface is capable of sending a message to at least one of a health care provider ~~or~~and pharmaceutical supplier, the data message from the data network interface including at least one of a patient identity, a pharmaceutical identity, and a treatment regimen.

58. (Currently Amended) The patient's intelligent drug dispensing appliance of claim 53 wherein the data network interface is capable of sending a data message to effect payment for a service, the service including at least one of the provision of health care and the provision of a pharmaceutical.

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59. (New) The patient's intelligent drug dispensing appliance of claim 30 wherein the pharmaceutical level detector is configured to ascertain a decremented amount of the unpackaged pharmaceutical remaining in the reservoir.

60. (New) The patient's intelligent drug dispensing appliance of claim 30 wherein the pharmaceutical level detector is configured to ascertain a depth measurement of the unpackaged pharmaceutical in the reservoir.

61. (New) The patient's intelligent drug dispensing appliance of claim 30 wherein the pharmaceutical level detector is configured to ascertain a static pressure within the reservoir.

62. (New) The patient's intelligent drug dispensing appliance of claim 53 wherein the pharmaceutical level detector is configured to ascertain a decremented amount of the unpackaged pharmaceutical remaining in the reservoir.

63. (New) The patient's intelligent drug dispensing appliance of claim 53 wherein the pharmaceutical level detector is configured to ascertain a depth measurement of the unpackaged pharmaceutical in the reservoir.

64. (New) The patient's intelligent drug dispensing appliance of claim 53 wherein the pharmaceutical level detector is configured to ascertain a static pressure within the reservoir.

65. (New) An intelligent direct-to-patient drug dispensing appliance comprising:
a controller;
a reservoir configured to contain a plurality of individual unit doses of an unpackaged pharmaceutical specific to an individual patient and to be dispensed over time to the individual patient, the unpackaged liquid pharmaceutical to be administered to the individual patient as individual unit doses for direct use by the individual patient according to a treatment regimen;
a drug delivery mechanism, coupled to, and responsive to the controller and to the reservoir, to controllably dispense the unpackaged liquid pharmaceutical directly from the

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reservoir, via an ink-jet print mechanism, as a mist to the individual patient in a precise amount corresponding to the individual unit doses in response to signals from the controller; and
a data network interface coupled to the controller,
wherein the appliance is sized and shaped for placement proximate to a patient remote from a health care facility.

66. (New) The appliance of claim 65 wherein the data network interface is configured to send, and to receive, a data message regarding the pharmaceutical over a data network through the data network interface to and from, respectively, at least one of a health care service provider and a pharmaceutical supplier wherein the data message from the patient's intelligent drug dispensing appliance identifies the patient for whom the pharmaceutical is required, the identity of the particular pharmaceutical, and the treatment regimen.